

**DIGITAL SIGNAL PROCESSOR BASED GENERATION
AND CONTROL OF ELECTRONIC SIGNALS
IN A GAMING MACHINE**

ABSTRACT

An apparatus and method for generating and controlling electronic signals in a gaming machine is disclosed. The provided apparatus and method include a gaming machine having a CPU or master gaming controller and a digital sound system. The digital sound system comprises one or more speakers, at least one memory unit storing data, a digital signal processor adapted to control and generate audio output, and a programmable logic device interposed between the master gaming controller and the digital signal processor, such that the digital signal processor is unable to communicate to the master gaming controller. The programmable logic device includes at least an address decoder and an event sequencer, with the event sequencer being able to convert instructions from the master gaming controller to instructions that can be executed by the digital signal processor.